

Date: Fri, 18 Feb 94 23:29:42 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V94 #177
To: Info-Hams

Info-Hams Digest Fri, 18 Feb 94 Volume 94 : Issue 177

Today's Topics:

 A QSL Card that will Make a Difference
 ARK 20 QRP Xcvr. Recommendations?
 ARRL DX Bulletin #10 - February 17, 1994
 ARRL Letter available via FTP
 A transmission line loss question
 Dom Rep & Haiti
 Jeff Gold
 Repeaters
 RF Power Amp stages, design. Help needed!
 This Week on Spectrum 02/19/94

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Sat, 19 Feb 1994 06:20:34 GMT
From: news.Hawaii.Edu!uhunix3.uhcc.Hawaii.Edu!jherman@ames.arpa
Subject: A QSL Card that will Make a Difference
To: info-hams@ucsd.edu

In article <2jul4m\$1g@clarknet.clark.net> andy@clark.net (Andrew M. Cohn) writes:

>
>Last week his 40 meter antenna fell victim to the famous Calvert County
>(MD) ice storm. The next day he lost power for 6 straight days. Now he's
>going into the hospital for hip surgery, followed by 6 weeks of recovery
>with nothing to do but watch ice melt. Not a good month for Ron Nord,
>N3AKP, who, by the way, is no spring chicken.
>

Newington CT February 17, 1994
To all radio amateurs

SB DX ARL ARLD010
ARLD010 DX news

The items in this week's bulletin are courtesy of Chod, VP2ML; Bruce, WA1G; WD4IEH; Dick, K3DI; and the Ohio/Penn and Yankee Clipper Contest Club DX PacketCluster networks. Thanks.

GUINEA BISSAU. Erik, SM0AGD, will be in J5-land during late February, and hopes to be able to do some operating. Erik last operated J5 in 1980. QSL via SM0AGD, Vestag 27, 19556 Marsta, Sweden.

SOUTHERN COOK ISLANDS. Seven Glen Canyon Wireless Association members will be on from Rarotonga between March 4 and 10. They plan to be active in the ARRL SSB DX Contest as ZK1AVY.

WALVIS BAY. Ian, ZS9A, is on 160 meters just before his sunrise. Check 1815 kHz around 0400z.

CAMBODIA. Sanyi, XU7VK, has been heard on 3522 kHz at 1524z, 7009 kHz at 1700z and on 14083 kHz RTT through the end of February.

DESECHEO ISLAND. According to Ray, AB4JI, the upcoming DXpedition for the SSB weekend of the ARRL International DX Contest has been cancelled. The U.S. Fish and Wildlife Service has denied landing permission because a group of Haitian squatters are on the island. The Coast Guard was unsuccessful in removing them, and reports are that the U.S. Navy may be called to remove the group. Until this situation is resolved, no landing permission can be given. AB4JI and crew hope to make last minute arrangements to operate from another island.

BELIZE. WB5B and WA5TKC will be signing V31BW and V31PP respectively, from February 19 to March 12. V31BW will operate primarily CW on 160 through 10 meters from South Water Caye, NA-080. V31PP will be located in the rain forest area near Blue Creek, and will operate 80 through 10 meters with SSB and RTT active in both ARRL DX Contests and the CQ WW 160 Meter Contest. QSL via their home calls.

ZAMBIA. DL7VTM, DG9WYL and DL7VLA will sign 9I2Z, 9I2M and 9I2A respectively, during their planned three week operation. They expect to be on the air around March 14. Listen for them on all bands and possibly for some satellite activity. It is believed that

this may be the first satellite operation from Zambia. QSL via DL7VR0.

CQ ZONE 2. VE1CBK, of CY0SAB fame, and VE3YYR will be active from February 22 to 28. Listen for them in the CQ WW 160 Meter Contest the weekend of February 26 and 27. Before the contest they will be working all bands, mainly with RTT RS-12. QSL via VE3YYR.

BAHAMAS. Dick, K3DI, will be signing C6AHL from Treasure Cay, Great Abaco, during the ARRL International DX Contest. This will be an all band, single op effort. He may even operate some QRP, conditions permitting. QSL via K3DI.

THIS WEEKEND ON THE RADIO. The CW weekend of the annual ARRL International DX Contest is a 48 hour event starting at 0000z February 19. W/VE stations work amateurs in as many DXCC countries as possible. DX stations work W/VE stations. W/VE stations send signal report and state/province. DX stations sent signal report and three digit number indicating transmitter output power. For full information and contest rules, check page 125 of December QST

Some island invasions planned for the contest include PS0F by W9VA, VP2E/WJ20; VP5B by K9IMM, GD0SLY by WA3CGE; V31TP by WC0W; and V31WW by a team.
NNNN

--

James J. Reisert Internet: reisert@wrksys.enet.dec.com
Digital Equipment Corp. UUCP: ...decwrl!wrksys.enet.dec.com!reisert
146 Main Street - ML03-6/C9 Voice: 508-493-5747
Maynard, MA 01754 FAX: 508-493-0395

Date: Sat, 19 Feb 1994 04:33:27 GMT
From: agate!library.ucla.edu!csulb.edu!csus.edu!netcom.com!wy1z@ames.arpa
Subject: ARRL Letter available via FTP
To: info-hams@ucsd.edu

In article <marchbgCLDG36.4Mw@netcom.com> marchbg@netcom.com (M Grant) writes:
>As part of an experiment, I am making the ARRL letter, which I have been
>posting to this and rec.radio.info, available via anonymous FTP. I plan
>to keep a repository of ARRL letters (we'll see how it goes). Future
>plans also are for the W5YI letter.
>
>If this proves to work without too much hassle, I'll keep it up.
>

```
>ftp to: netcom8.netcom.com
> /pub/marchbg
>
>Enjoy!
>--
>=====
> Marc B. Grant      Voice Mail: 214-246-1150
> marchbg@netcom.com  Amateur Radio N5MEI
> marchbg@esy.com
>=====
```

Along with the ARRL Letter, Amateur Radio Newsline and ARRL bulletins are all redistributed on three different lists maintained by the Boston Amateur Radio Club.

To subscribe to the ARRL Letter:

send a message to: majordomo@world.std.com
In the body of the message, type: subscribe letter-list

To subscribe to Amateur Radio Newsline:

send a message to: majordomo@world.std.com
In the body of the message, type: subscribe newsline-list
(I grab Newsline off rec.radio.amateur.misc. I'm in the process of trying to get it sent directly to the list...)

To receive timely League bulletins as e-mail:

send a message to: majordomo@world.std.com
In the body of the message, type: subscribe w1aw-list

Or, to subscribe to all three, just send one message to majordomo@world.std.com, with three separate lines, each with a subscribe line.

73,
Scott

--

```
=====
| Scott Ehrlich      Internet: wy1z@neu.edu      BITNET: wy1z@NUHUB  |
| Amateur Radio: wy1z      AX.25: wy1z@k1ugm.ma.usa.na      |
```

|-----|
| Maintainer of the Boston Amateur Radio Club hamradio FTP area on |
| the World - ftp.std.com pub/hamradio |
=====

Date: Sat, 19 Feb 1994 03:21:52 GMT
From: agate!howland.reston.ans.net!cs.utexas.edu!sdd.hp.com!col.hp.com!srigenprp!
alanb@network.ucsd.edu
Subject: A transmission line loss question
To: info-hams@ucsd.edu

Tom Bruhns (tomb@lsid.hp.com) wrote:

: Assume you have a 50 ohm antenna you want to use on a single
: frequency in the two meter band. You will be feeding it with
: about 100 feet of coax, which will be cut to an exact integer
: multiple number of half-wavelengths on the operating frequency.
: Which of the following two transmission lines will you choose
: to give lower loss?

: A. 50 ohm air-insulated copper line with 1" OD

: B. 75 ohm air-insulated copper line with 1" OD -- in other
: words, same line as in (A), but a smaller center conductor.

Great quiz question. The answer is that the 75 ohm line with the
1.5:1 SWR will have higher loss than the 50 ohm line with 1:1 SWR.

It's true that the 75 ohm line has lower loss WHEN TERMINATED WITH 75
OHMS. To see why, realize that nearly all the loss in an air-dielectric
line is due to the current flowing in the conductors ($I^2 \cdot R$ loss).
For a given shield size, a 75-ohm line's center conductor has 1.36 times
the resistance per unit length of a 50-ohm line.

Derivation of above: For an air-dielectric coaxial line,
 $Z_0 = 138 \log(D/d)$ where Z_0 = line characteristic impedance,
 D = ID of shield and d = OD of center conductor. So:
 $D/d = 10^{(Z_0/138)}$ which is 2.3 for 50-ohm and 3.50 for 75-ohm line.
Because of skin effect, the resistance per unit length is inversely
proportional to the circumference (and thus diameter). This means
that for a given shield diameter, the total resistance of both
conductors is proportional to $(1/D + 1/d) = (1/D) * (1 + D/d)$.
So, for a given shield size (set $D=1$), the 75-ohm line has
 $(1+3.5)/(1+2.3) = 1.36$ times higher resistance than 50-ohm line.

For a given power level, the current in the 75-ohm line is $\sqrt{50/75}$

= .816 times that in a 50-ohm line. So $I^2 \cdot R = .816^2 \cdot 1.36 = .907$ times the loss in a 50-ohm line.

But getting back to the quiz question:

Since the line is a multiple of $1/2$ wavelength, the feedpoint impedance will be 50 ohms, even with the 75 ohm line.

The current varies sinusoidally along the 75-ohm line (the standing wave), being maximum at 50-ohm points (integer multiple of $1/2$ wave from the end) and minimum in between, where the impedance is $75^2/50 = 112.5$ ohms. If the current is 1A at the 50-ohm points, then it is $\text{SQRT}(50/112.5) = 2/3$ A at the 112.5 ohm points. So the standing wave of current can be represented by

$$I = 1A * [5/6 + (1/6) * \cos(2\pi s/L)]$$

where s = distance along line and L = wave length.

The rms current, averaged over the entire line, is then

$$5/6 + .707/6 = .951A$$

So the question is: does .951A flowing in a 75-ohm line's center conductor cause more loss than 1A flowing in a 50-ohm line's center conductor? We already know the 75-ohm line has 1.36 times the loss resistance, so with .951 times the current the loss is:

$$I^2 * R = .951^2 * 1.36 = 1.23 \text{ times the loss in a 50-ohm line}$$

If you have 1 dB of loss in the 50-ohm line, the 75-ohm line will have 1.23 dB loss when feeding a 50-ohm load.

As a practical matter, however, low-loss 75-ohm coax can often be obtained free as scrap "ends" from your local cable TV company. Even when feeding a 50-ohm load, it will generally have lower loss than standard RG-8 type or (gasp!) RG-58 cable. The only hard part is figuring out how to make inexpensive connectors for it.

AL N1AL

Date: Wed, 16 Feb 1994 22:09:02 +0000

From: swrinde!cs.utexas.edu!howland.reston.ans.net!pipex!demon!kanga.demon.co.uk!
dick@network.ucsd.edu

Subject: Dom Rep & Haiti

To: info-hams@ucsd.edu

HI gang,
I am going the Dom Rep and , hopefully Haiti
for vacation in middle May. Any comments will
be very welcome. Hoping to take rig and operate
a little, (when she lets me HI)

Date: Sat, 19 Feb 1994 04:50:04 GMT
From: agate!howland.reston.ans.net!news.intercon.com!udel!news.sprintlink.net!
direct!kg7bk@ames.arpa
Subject: Jeff Gold
To: info-hams@ucsd.edu

Jesse L Wei (j1w3@cec3.wustl.edu) wrote:

: Seems pretty magical to me. -jesse

"magic - the pretended art of producing marvelous results by compelling the
aid of spirits, or by using the secret forces of nature." OK, Jesse, let's
see some of those spirits and/or secret forces of nature.

: <no flame intended, but a flare of irritation with the post>

My point exactly! This is a technical group. Using a person's name as the
subject of an article on rec.radio.amateur.misc and slandering that person
in the article is immoral, unethical, and unlawful.

73, Cecil, kg7bk@indirect.com

Date: 18 Feb 1994 23:31:04 -0500
From: mary.iaa.org!mary.iaa.org!not-for-mail@uunet.uu.net
Subject: Repeaters
To: info-hams@ucsd.edu

Would someone please give me some general information about mobile ham
radio, and repeaters, or point me to an FAQ. Specificly, I would like
to know...

- Can mobile amateur radio stations operate in full duplex?
- Can repeaters in fact be used to place local telephone calls? If so,
is there a charge for this service? Is it limited?
- What are the legal restrictions on amateur radio traffic? Are data

connections allowed?

- What baud rate could I reliably connect at through a radio link?

Thanks for the help!

--

W. Robert Nelson (gsa@iia.org)

Date: Sat, 19 Feb 1994 04:37:10 GMT

From: library.ucla.edu!europa.eng.gtefsd.com!howland.reston.ans.net!

newsserver.jvnc.net!raffles.technet.sg!ntuix!ntuvax.ntu.ac.sg!

asirene@network.ucsd.edu

Subject: RF Power Amp stages, design. Help needed!

To: info-hams@ucsd.edu

Hi,

I'd like to know what considerations are required to modify an existing HF RF Power stage to a higher power without needing to actually build a separate HF linear amp. Specifically I'd like to know if it is possible to drop a different transistor into place and change the current limiting resistor of the final stage, provided the transistor is carefully selected, and get an increased power output? What about the driver stage? Is the output of the driver stage critical as I see in the catalog, it appears that some of these transistors come with a specified input power, eg: 0.1 watt in/ 15 watt out/ Ppe 23 dB. What exactly is the Ppe? Another thing about transistor selection, will a VHF transistor work well in a HF circuit? For example, the specs above are for the MRF 261 transistor which is actually a VHF transistor, will this work in a HF power stage then? More specifically I am trying to modify the output of the ARK 20 QRP transceiver from about 3 watts to say 12-20 watts or so. How difficult will the change in design be? The reason I am thinking of this is that I want to keep the QSK active rather than have a separate QSK TR switch for the additional linear amp.

Tks for any advice.

73 de 9V Daniel

Date: 17 Feb 1994 11:56:44 -0500

From: psinntp!pwc.com!psinntp!starcomm.overleaf.com!not-for-mail@uunet.uu.net

Subject: This Week on Spectrum 02/19/94

To: info-hams@ucsd.edu

This week on Spectrum we are going to visit the world of utility listening with Larry Van Horn. Larry is the ute editor for Monitoring Times. We haven't looked at ute since mid summer and lots of interesting things have happened. Almost 90% of the frequency space from 3 to 30 MHz is dedicated to non-broadcast transmissions and there are lots of fun things to explore.

--

Spectrum airs live Sunday at 0300 UTC (2200 EST Saturday) on:

WWCR, 5810 KHz, Nashville, TN (World Wide)
WIFI, 1460 AM, Philadelphia, PA (Philadelphia Area)
Omega Radio Network, Galaxy III, X17, 5.8 MHz WIDE audio. (Satellite)

Spectrum is rebroadcast:

Sunday at 1500 EST, on WIFI, 1460 AM, Philadelphia, PA (Philadelphia Area)
Monday at 0400 UTC (2300 EST Sunday),
on WWCR, 7435 KHz, Nashville, TN (World Wide)

--

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Date: 17 Feb 94 21:15:47 GMT
From: nprdc!ihnp4.ucsd.edu!sdd.hp.com!vixen.cso.uiuc.edu!howland.reston.ans.net!
cs.utexas.edu!oakhill!yosemite.sps.mot.com!ben@network.ucsd.edu
To: info-hams@ucsd.edu

References <2jt93e\$ds9@charm.magnus.acs.ohio-state.edu>,
<CLC4Dw.10E@oakhill.sps.mot.com>, <2juhv0\$h56@charm.magnus.acs.ohio-state.edu>
Subject : Re: Nude amateur radio clubs

In article <2juhv0\$h56@charm.magnus.acs.ohio-state.edu>,
William VanHorne <wvhorn@magnus.acs.ohio-state.edu> wrote:
>In article <CLC4Dw.10E@oakhill.sps.mot.com>,
>Ben Thornton <ben@yosemite.sps.mot.com> wrote:
>
>>So, explain to me just how it is that someone is somehow a different person
>>simply because they wear no clothing. The difference is only in the eye
>>of the beholder...
>
>Hardly. If you're nude, you can't wear one of those nifty baseball caps
>with your name and callsign on it. What's the point of being in ham

To: info-hams@ucsd.edu

References <CLFDMz.ICJ@news.direct.net>, <2k2r9g\$e2v@bigfoot.wustl.edu>,
<CLGG3G.EMB@news.direct.net>
Subject : Re: Jeff Gold

In article <CLGG3G.EMB@news.direct.net> kg7bk@indirect.com (Cecil Moore) writes:
>Jesse L Wei (jlw3@cec3.wustl.edu) wrote:

>
>: Seems pretty magical to me. -jesse
>
>"magic - the pretended art of producing marvelous results by compelling the
>aid of spirits, or by using the secret forces of nature." OK, Jesse, let's
>see some of those spirits and/or secret forces of nature.

Oh, Cecil, give it a rest. As far as many people are concerned, radio is a secret force of nature. Anyway, you are trying so hard to interfere with a perfectly valid amateur radio thread because you appear to be some fan of Ramsey Electronics. Fine, if you are fan, fine. But attempting to discredit critics of Ramsey is pointless and inflammatory. You've worked hard to discredit my statements, trying one tactic after another. First you condemn Jeff Gold as "less than a member of the human race". Then you try "but Jeff had an FTR-146 that is obsolete and therefore let's drop it". Then you try the very behavior you condemned Jeff Gold for. Then you outright claim that I'm a liar ("giving you the benefit of the doubt..."). You can't have it both ways, Cecil.

What you fail to acknowledge is that the public dealings of an amateur business is a perfectly valid topic for rec.radio.amateur.misc. Even if you don't agree with the topic, it doesn't invalidate the topic.

>: <no flame intended, but a flare of irritation with the post>
>
>My point exactly! This is a technical group. Using a person's name as the
>subject of an article on rec.radio.amateur.misc and slandering that person
>in the article is immoral, unethical, and unlawful.

You're missing the point entirely! Either that or you refuse to see it. The "Jeff Gold" post was intentionally insulting and inflammatory, and it completely flies in the face of your earlier statement that Jeff Gold is "less than human". Attacking Jeff Gold because you don't like his postings *doesn't* belong on rec.radio.amateur.misc, it would be fine in alt.flame, where it seems many hams won't go have the flame fests but should.

--

* Dana H. Myers KK6JQ, DoD 466 | Views expressed here are *
* (310) 348-6043 | mine and do not necessarily *
* Dana.Myers@West.Sun.Com | reflect those of my employer *
* This Extra supports the abolition of the 13 and 20 WPM tests *

Date: Sat, 19 Feb 1994 04:30:23 GMT
From: agate!howland.reston.ans.net!news.intercon.com!udel!news.sprintlink.net!
direct!kg7bk@network.ucsd.edu
To: info-hams@ucsd.edu

References <x8yqthx.jramsey@delphi.com>, <2jqu8k\$96m@news.acns.nwu.edu>,
<2jr13kINNkbv@abyss.West.Sun.COM>
Subject : Re: Ramsey slams ARRL (was Re: RAMSEY FX TRANSCEIVER)

Dana Myers (myers@pongo.West.Sun.COM) wrote:
: If you have any kind of trouble with Ramsey kits, you run the risk of
: being slandered. * Dana H. Myers KK6JQ

Slander has a legal definition. It is next to impossible to slander someone during a private telephone conversation. It is very easy to commit slander on Internet. Statements that can't be proven resulting in monetary loss is all one needs to prove slander. Who did you say got slandered?

73, Cecil, kg7bk@indirect.com

Date: 17 Feb 94 21:36:13 GMT
From: nprdc!ihnp4.ucsd.edu!sdd.hp.com!vixen.cso.uiuc.edu!howland.reston.ans.net!
cs.utexas.edu!oakhill!yosemite.sps.mot.com!ben@network.ucsd.edu
To: info-hams@ucsd.edu

References <2jt93e\$ds9@charm.magnus.acs.ohio-state.edu>,
<CLC4Dw.10E@oakhill.sps.mot.com>, <1994Feb17.145055.3550@ke4zv.atl.ga.us> p
Subject : Re: Nude amateur radio clubs

>In article <CLC4Dw.10E@oakhill.sps.mot.com> I write:
>>

>>So, explain to me just how it is that someone is somehow a different person
>>simply because they wear no clothing. The difference is only in the eye
>>of the beholder...

In article <1994Feb17.145055.3550@ke4zv.atl.ga.us>,
Gary Coffman <gary@ke4zv.atl.ga.us> responded:
>

>Of course, all esthetics are in the eye of the beholder. Aside from it's
>utilitarian aspect, decorative clothing is designed to mask the ugly,
>not hide the beautiful. And according to the prevailing esthetic, most
>hams *need* that decorative covering to avoid offending the eye of the
>beholder. A prime rule of society is that one shouldn't do something in
>public that frightens the horses.

I'll let that argument die of it's own accord, but will make one comment:

Yes, clothing has it's purposes but there are many situations in which the wearing of clothing serves no real purpose other than reinforce a false sense of modesty such as when swimming, sunbathing, kicking back to enjoy a beer, etc. Everyone has seen a nude body at least once before, and many people have discovered that "the prevailing esthetic" has no real benefit to society other than to protect the overly-squeamish.

--ben

--

Ben Thornton

Amateur call: WD5HLS

Internet: ben@yosemite.sps.mot.com

Motorola Inc., Austin, TX

Caution: Wearing clothes has been shown to cause permanent psychological dependence on textiles. WEAR THEM AT YOUR OWN RISK.

End of Info-Hams Digest V94 #177
